

REMARKS

Discussion of Claims Amendments

Claims 20-22 have been amended to further sharpen the claim language. The amended claims are supported by the original claims and specification. No new matter has been added.

The Present Invention

After entry of the amendment, claims 20-22 are pending. A set of the pending claims is attached.

Discussion of Rejections

Claims 20 to 22 are rejected under 35 USC 103(a), as allegedly unpatentable over (i) Nojiri '111 in view to Taylor '148, and further in view of Tanaka '616; and (ii) Tanaka '616 in view of Taylor '148, and Koike '395. Applicant respectfully traverses the rejections.

The presently claimed invention is characterized in that the resin composition (a) layer consisting essentially of an acrylic polymer (a), a fluorescent substance (b), a compound containing at least one ethylenically unsaturated group (c), and a polymerization inhibitor (d) and a photosensitive resin composition (B) layer are provided inside the cell, are exposed to light, developed, and baked.

The resin composition (A) layer does not comprise a photoinitiator in the presently claimed invention. The resin composition (A) layer comprises the polymerization inhibitor (d) in order to avoid the polymerization of the compound containing at least one ethylenically unsaturated group (c) when the photoinitiator in a photosensitive resin composition (B) layer migrates to the resin composition (A) layer. The compound containing at least one ethylenically unsaturated group (c) is used not to be polymerized but to plasticize the resin composition (A) layer. The resin composition (A) layer is not photopolymerized.

In distinct contrast, Nojiri '111 discloses that the resin composition (A) layer is photopolymerized. Tanaka '616 discloses that the resin composition layer also includes an ethylenically unsaturated monomer and a photoinitiator in order to aid in the photopolymerization. Nojiri '111 and Tanaka '616 teach away from the presently claimed invention. Nojiri '111 and Tanaka '616 teach that polymerization is required. In this respect, the Office Action has failed to make a prima facie case for obviousness.

Even if Taylor '148 teaches that the photoinitiator is not necessary for photopolymerization of acrylic polymers, such a teaching would not cure the deficiencies of Nojiri '111 and Tanaka '616. Even if Nojiri '111 and Tanaka '616 are combined with Taylor '148, the combination does not suggest to those of ordinary skill in the art the presently claimed

invention. When the cited references contradict, the suggestive power of the combination is eviscerated.

Koike '395 discloses that the photoresist layer is exposed and developed without being baked. The deficiency of Koike '395 is not cured by Tanaka '616 or Taylor '148. There is no motivation to combine Tanaka '616, Koike '395, and Taylor '148. There is inconsistent or contradicting teaching in the art. Even if these references are combined, the combination does not suggest to those of ordinary skill in the art the presently claimed invention.

The Office Action states that the previously filed Rule 132 Declaration does not represent a comparison between the claimed subject matter and the prior art since Claims 20 to 22 require the use of photoinhibitor.

The present invention is superior to the prior art in regard to the pattern of fluorescent substance. For example, if the resin composition (A) layer and a photosensitive resin composition (B) layer are exposed to light, are developed, and are baked after passing the long period from the time they are provided inside the cell, the resin composition (A) will be easily hardened, and then the formed pattern of fluorescent substance will have defects of pattern by the migration of the photoinitiator from a photosensitive resin composition (B) layer to the resin composition (A) layer. Therefore, the presence of photoinhibitor (d) in the resin composition (A) layer is significant in the present invention.

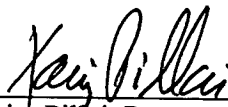
In view of the foregoing, the obviousness rejection of claims 20-22 should be withdrawn.

In re Appln. of HIROAKI SATOH
Application No. 09/271,447

Conclusion

The application is considered in good and proper form for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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PATENT
Attorney Docket No. 400113/ASAHINA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

HIROAKI SATOH

Application No. 09/271,447

Art Unit: 1762

Filed: March 18, 1999

Examiner: M. Cleveland

For: PROCESS FOR FORMING A PATTERN
OF FLUORESCENT SUBSTRATE AND
PLASMA DISPLAY PANEL

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AMENDMENTS TO CLAIMS MADE IN RESPONSE TO
OFFICE ACTION DATED DECEMBER 20, 2002

Amendments to existing claims:

20. (Amended) A process for forming a pattern of fluorescent substance into the cell of a fluorescent substance display substrate comprising providing inside the cell two separate layers which are (i) a resin composition (A) layer and (ii) a photosensitive resin composition (B) layer, exposing the layers to light, developing the exposed layers, and baking the developed layers; wherein the resin composition (A) layer consists essentially of an acrylic polymer (a) having a weight average molecular weight of 10000 to 300000 and an acid number of 80 to 250 mgKOH/g, a fluorescent substance (b), ~~an organic~~ compound containing at least one ethylenically unsaturated group (c) having a viscosity of 5-15000 mPa.sec at 20°C, and a polymerization inhibitor (d), and the resin composition (A) layer is disposed between the inside of the cell and the photosensitive resin composition (B) layer.

21. (Amended) A process for forming a pattern of fluorescent substance into the cell of a fluorescent substance display substrate, wherein a resin composition (A) layer, consisting essentially of an acrylic polymer (a) having a weight average molecular weight of 10000 to 300000 and an acid number of 80 to 250 mgKOH/g, a fluorescent substance (b), ~~an organic~~ compound containing at least one ethylenically unsaturated group (c) having a viscosity of 5-15000 mPa.sec at 20°C, and a polymerization inhibitor (d), and a photosensitive resin composition (B) layer are formed inside the cell, and then they are exposed, developed and baked, wherein the photosensitive resin composition (B) layer is formed in the cell after the resin composition (A) layer is formed.

22. (Amended) A process for forming a pattern of fluorescent substance into the cell of a fluorescent substance display substrate comprising providing inside the cell two separate layers which are (i) a resin composition (A) layer and (ii) a photosensitive resin composition (B) layer, wherein the resin composition (A) layer, consisting essentially of an acrylic polymer (a) having a weight average molecular weight of 10000 to 300000 and an acid number of 80 to 250 mgKOH/g, a fluorescent substance (b), ~~an organic~~ compound containing at least one ethylenically unsaturated group (c) having a viscosity of 5-15000 mPa.sec at 20°C, and a polymerization inhibitor (d), and the photosensitive resin composition (B) layer are formed inside the cell, and then they are exposed, developed and baked, wherein the photosensitive resin composition (B) layer is formed in the cell after the resin composition (A) layer is formed.